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ABSTRACT

This paper describes a 2-month project developed by the Sage Colleges (New York) and the University of Capetown Medical School in South Africa to help the medical faculty at the Capetown Medical School teach its newly diverse student body. The program is intended to improve student retention and it emphasizes the need for faculty to assure students coming from nonacademic backgrounds of their competence and to celebrate multicultural diversity in higher education. The paper offers narratives and descriptions of weekly interactive meetings between visiting faculty from Sage Colleges and the medical school faculty as they explore topics ranging from how to say hello in students' first language, to faculty's thoughts on teaching, to the different social conventions of various ethnic groups, to student learning difficulties. In addition, specific workshop topics were organized on: faculty teaching and curricular reform; various approaches to the lecture method, such as scaffolding and concept development; moving from large- to small-group teaching; using tutors and successful students as role models; multiple intelligence theory and its uses; multicultural teaching and attending to the cultures present in the classroom; and evaluation, testing, and assessment procedures. (MKA)

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Principles of Pedagogy in Teaching in A Diverse Medical School: The University of Capetown South Africa Medical School

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Introduction

This paper is a joint effort by Dr. Rothenberg, Professor of Education at The Sage Colleges, who visited the U. of Capetown Medical School to help the medical faculty in teaching their newly diverse student body, and Dr. Holland, Chair of Hematology at the Medical School, who participated in the project. Both authors feel that the diversity at the U. of Capetwon Medical School has the potential for a rich culture of medical knowledge, which encompasses the knowledge that students bring to the University, as well as the traditional medical expertise continued in Capetown's tradition. We will describe our work together, and some reflections on

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the process we experienced qualitatively.

The literature on minority student retention in the United States informed the early preparations for Dr. Rothenberg, in terms of thinking about the problems students and faculty might have with a dramatically changed culture of the medical school. Terenzini et al (1994, Pascarella & Terenzini, 1977) described findings from a series of studies on United States campuses which found that faculty/student interactions on a number of levels were crucial in diverse students' staying in college or university. In particular, students from non-academic backgrounds needed to be reassured of their competence *by faculty*, and this faculty recognition was important both in and out of class. While Terenzini and his colleagues emphasized that each diverse student's experience was unique, Tierney (1992) took this point an important step further. Tierney studied Native Americans in starting to college in the United States, and found that these students were often seen as bringing "the problems of having different backgrounds" to the higher education setting. Tierney highlights the core of all these studies of retention having "insiders", that is people who have spent their adult lives in academia, do the studying of what we call "the problems". Even framing the issue in terms of a problem to be solved (student retention) limits our views of the positive values in higher education that students bring from their various backgrounds . We seldom actively promote the strongly positive values of celebrating multicultural diversity in higher education, even though we tout these values in our admissions literature. These points formed the background for working within the University of Capetown Medical School, so recently having become a place of diversity. The Capetown project was begun, therefore, with an orientation of learning about this setting for a new kind of medical school. Dr. Rothenberg met with Medical School instructors in bi-weekly workshops and in the Medical departmental meetings, discussing topics of each department's choice. More about these

meetings will be described later. Several illlustrative episodes are described here that occurred during the two month project Rothenberg, 1999).

1. Mollo, wethu. Usaphila?

After working with the medical teaching faculty for several workshop sessions, Dr. Rothenberg told the group that every professor should know how to say hello, how are you, good-bye, best wishes, in every first language spoken in the class. And she said that professors should systematically learn students' names and use them [she also give ideas on how to do this]. Nervous laughter ensued. Later that day several professors told her that in the recent past, the few people designated as coloured or black who attended the medical school never were addressed by name. Other students were constantly named, professors knew their older siblings and the schools they went to, told stories about their backgrounds. They felt that every day they had snuck in a back window to be in the school. And now they are professors in the medical school.

2. Another professor told Dr. Rothenberg, after a pediatric department meeting together, that he never, ever thought about teaching before. He said he wanted to train registrars (doctors in residence) in his field (pediatric endocrinology) but it had not occurred to him that this was teaching. "I just lectured as I had been lectured to myself. These discussions of how you teach open up a world to me."

3. Dr. Rothenberg had the advantage during her stay of living at the Medical Residence (the "MedRes") where most of the residents were tribal Africans or of East Indian or Malaysian descent. Meals were regular social occasions, the source of new friendships and a great deal of learning. The students had many ideas about improving medical education and shared them willingly, enthusiastically. They also enjoyed teaching how to say "hello, how are you?" in their first languages.

4.Some examples of these discussions follow, with names changed.

Larna, a sixth year medical student from the Northwest Province, told how much he loves seeing patients:" Now I know what all the work and pain [of the first years] was about. This is my life forever! The only thing I am sorry about right now is that I do not find the time to meet with the 'younger generation'[!] - I mean the first and second year students."

[One curricular project with the Dept. of Medicine was starting a program for sixth year students, under supervision, to teach third year students to take histories on the wards. This was one solution to the problem of decreasing numbers of teaching faculty.]

Argan, a third year student from Northern Province, said how difficult chemistry was, failing it the first time. Whe asked how many languages he has learned, he replied, "four - I'm learning Xhosa now" (Sotho, Zulu, English and Afrikaans). It was suggested that chemistry is another language, that has many of the same characteristics -- syntax, cognates-- of the languages he has already taught himself.

[Now A. uses this same information to tutor first year students. And he wants to do research in biochemistry, along with a general practice in the Orange Free State Province, "near home but not too near".]

Lorinda, third year student from Namibia, said that she has learned to use her visual strengths to advantage: "I've discovered that I can see the body systems in my mind, and that way I identify the names of the organs, muscles, nerves. I translate what I know automatically from the text to the living body."

A fourth year student, Bolanga, described how he and his friends characteristically wait for each other to speak in a discussion, a cultural practice he and his friends believe leads professors to think they are less intelligent or knowledgeable than their highly verbal white peers. Professors

tell them to "be the best one, to win". He said: "We believe in sharing our knowledge. We do not have such an egocentric competitive approach to medicine. You know, doctors could be trying to be the best and smartest one, while the patient dies".

General comments from groups of students included: "Ask the lecturers to speak clearly and make sure we understand their English. Tell the tutors not to repeat the lecture when we ask for clarification. Have more tuts (tutorials) and fewer lectures. Stop the extended [seventh year] program and give us computer assistance and writing help. Improve the 'attitude' of the lecturers..."

The U of Capetown Medical School is a six or seven year program, depending upon the preparation of students before entering the medical school. The additional year was a development designed specifically after the ending of apartheid when numerous students began medical school without a comprehensive preparation in the necessary subject matter. Students entering medical school in South Africa do not attend the university before medical school, but are admitted directly from their secondary schools, from whichever school system they have attended and graduated. Preparation for medical school is therefore dependant upon each student's prior educational work at varying secondary schools, primarily throughout South Africa and neighboring countries such as Namibia.

Information concerning the profile of the the South African medical schools has been derived from a profile compiled by Benatar, Folb and Van Niekerk (1997, in Van Niekerk, 1999). Under apartheid policy, the seven active medical schools in South Africa were apportioned as follows: three designated "white", two "black", and two with open admissions policies but predominantly "white". Three of these medical schools were formerly taught only in Afrikaans; only 12% of all South Africans speak English as their first language, although

now all medical schools except one are teaching primarily in English. In 1985, for the first time, four of 160 entering medical students at the U. of Capetown Medical School were black tribal Africans. That number remained the same until 1991 when numbers rose each year, until 1995 to 1999 when numbers have reached from between 40 and 70 each year, varying by quality of the candidates. For 1999, the ethnic/cultural background make-up of the entering class at the U. of Capetown Medical School was as follows: 45% tribal "black" African, 30% "white", 15% "colored" (Malaysian descent and mixed background), 10% Indian descent.

There were two main focuses of the project: interactive meetings between Dr. Rothenberg and individual departments, and weekly workshops on specific topics concerning teaching in a diverse medical school. Meetings were set up with the Departments in the Medical School, through the Dean's Office in order to work on educational issues. Departments that participated were: Anatomy, Anatomical Pathology, Medicine, Psychiatry, Obstetrics and Gynecology, Hemotology, Pediatrics, and Physiotherapy. In addition to the above-named departments, the following departments were represented in the workshops: Physiology and Human biology, Biochemistry, Histology, Occupational Therapy, Speech Therapy, Psychology, Otolaryngology, Primary Health Care.

Department Meetings:

The department meetings were actively attended, at the requests of Heads of Departments. At their start, the Head of Department for Anatomical Pathology requested that Dr. Rothenberg attend a lecture and a "practical" ("prac" or lab). He also brought their course outline (designed as a study guide for the students) and practical tutor's book. Dr. Rothenberg read the sections for the lecture and prac that she attended; fortunately this was the beginning of the semester, so it was, in effect, beginning the course with the students. The lecture and prac

were on the various edemas, and both were based on work with clinical slides. From this experience ideas were developed concerning the pedagogical notion of *concept attainment*, which was essentially what the students were doing in learning about edema. The lecturer knows why the particular 20 slides go together, and so do the students, as the label "edema", from the study guide. However, visually the particular group of slides may make perfect sense as a concept to the professor, but not to the student. There is no way of the professor's checking on this, unless the "practical" is sure to cover the same slides, which would be unusual. In discussion with the department, it appeared that many students remain confused, so we discussed reviewing these concepts and their exemplars in the slides with colleagues. It was also suggested that the lecturer ask the students to write down what the particular group of visual examples have in common (besides being, for example, all edemas). A quick glance would tell if most of the students understood the concept.

For the most part these department meetings were highly interactive discussions. Topics considered at these meetings included overall curriculum reform and problem or case based learning, ways of bringing out students' cultural skills which are unfamiliar to us, the narrowness of academic medical viewpoints, helping students to translate from visual media to verbal and vice versa, problems with three-dimensional learning (from picture to slides to the cadaver), apprehending the increasing knowledge base, teaching larger groups when you want to teach smaller groups, techniques of using groups, and issues surrounding racism and political correctness.

Faculty teachers at times would raise questions about new students' lacks in academic skills and knowledge. Each of these were addressed specifically and we often found that the problems were not, in fact, those of one or two ethnic groups of students, but were common to a

number of people. For example, many students have difficulty with writing skills, and with memorizing anatomical terms and functions. We also discussed ways that problem-solving might be differently represented in cultures less familiar to us as academics.

Another important theme of these meetings was a strong desire among faculty and students to introduce clinical work early in medical school, earlier than their current curriculum provides. In addition to its value in medical education, clinical emphases also allow students to show talent and aptitude in areas beyond, or different from, acquisition of factual knowledge. Once again, we did valuable work on thinking about the different kinds of knowledge physicians need to acquire.

Workshops:

Topics for the workshops were developed at a general meeting of the medical school faculty. During the meeting we generated topics on which faculty wished to have workshops as follows:

Organizing Faculty Teaching and Curricular Reform

Approaches to the Lecture Method such as Scaffolding and Concept Development

Moving from Large to Small Group Teaching,

The Tutors and Successful Students as Role Models,

Multiple Intelligence Theory and its uses,

Multicultural Teaching and Attending to the Cultures present in the classes,

Evaluation, Testing and Assessment Procedures.

Although each weekly workshop was designed to be presented and then repeated, in reality each workshop tended to be different and somewhat distinct, because of the problem-

solving nature of each workshop. We started with the topics but then led into individual teaching issues. Although the workshops were didactic, with information presented, individual professors brought up many situations and problems they wanted either to discuss or receive direct help and solutions.

After each workshop and department meeting the work was summarized and sent to the participants by e-mail. This allowed individuals to respond by e-mail, either personally or to the group as a wider conversation. At times these conversations allowed for greater contact among the departments, especially on areas of common interest. One of these is the use of case studies both as a way of introducing clinical material early in medical school, and also to help students integrate material from year to year. There was much concern about the students' difficulties in remembering knowledge from the early years, pre-clinical, and integrating that knowledge with the new. In our workshops, emphasis was placed on giving students greater responsibility for all aspects of their learning. We developed the idea of having students update their case studies at each transition point - end of the term, beginning of the term. Each student's work would then be compared to an "ideal" rubric for the cases which the faculty would have developed.

Departments hope to develop case studies which involve various illnesses, starting basically and adding with the years. When we first began talking about this idea, several faculty members said they liked the idea, but doubted that others would -- as the momentum grew, the conversations also grew in numbers of participants, and the doubts diminished. In fact, the departments of medicine and biochemistry had already cooperated on one such case study venture.

Another major area of discussion was the importance of professors as role models, both as scholars and as clinicians. One professor commented that in all his work in graduate school in

clinical psychology, he had never seen a professor actually act as a psychologist. The idea of a professor acting as a clinician in class shows the students the specifics of professional role modeling, as distinct from some implicit non-professional role modeling which students commonly view, such as seeing their physician professors driving expensive cars. This also helps medical students to see their own potential as role models in South African society. In a meeting with the student Medical School Society, students complained that they did not have enough [black] role models at the University. We discussed how this will be their own personal role, and soon.

Of course, there are very real problems stemming from educational backgrounds and cultural differences. Examinations are notoriously culture bound, and strategies of successfully taking examinations are highly susceptible to training in preparatory years. Oral exams, called "vyvers" (an Afrikaans abbreviation) at the U. of Capetown, are difficult for students whose first language is not English, and we discussed ways in which students, in formal and informal groups, can help each other to use English verbally.

Perhaps the most important aspect of these meetings was our increasing discussion of the positive and new aspects of cultural experience that the diversity of the students brings to the medical school. In addition to the applicability of this idea at the U. of Capetown, this could be a real boon to consideration of methods for student retention in the United States. Many of us in academia still have a pervasive and insidious sense of the model of "the disadvantaged student" in our universities, who brings problems to school with him/her. Working with the South African students and their professors has made more clearly the point that deplorably bad education is very different from culture (although certainly, bad, oppressive education can interfere with one's culture and traditions). We all have a great deal to learn about the cultures (for example, valuable community approaches to health problems) that students bring to the university.

In addition to the cultures in which they were brought up, black and other students who have been discriminated against have developed keen survival and adaptive skills that can serve them well. A good example cited above is students learning many languages, sometimes under oppressive conditions. As with most of us, however, not all of such skills serve people well, and the students also learn about this every day. It is fascinating to think about and work on distinguishing among cultural characteristics that add breadth and depth to the medical school and the society, and the characteristics learned from legacies of bad education, oppression, and prejudice. We have much to learn from each other, and such work is valuable wherever it occurs.

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